

TITLE: Use of Surgical Masks in the Operating Room: Clinical Effectiveness

DATE: 17 June 2011

RESEARCH QUESTION

What is the clinical evidence regarding the effectiveness of wearing masks in the operating room to reduce bacterial transmission from staff to patients?

KEY MESSAGE

The evidence suggests that the effectiveness of wearing masks in the operating room to reduce bacterial transmission from staff to patients is not clear.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library (2011, Issue 5), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between Jan 1, 2009 and Jun 13, 2011. Internet links were provided, where available.

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, non-randomized studies, and evidence-based guidelines.

Two systematic reviews and one randomized controlled trial were identified pertaining to the effectiveness of wearing masks in the operating room to reduce bacterial transmission from staff to patients. Additional literature of potential interest is provided in the appendix.

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Health technology assessments
No literature identified.

Systematic reviews and meta-analyses

1. Lipp A, Edwards P. Disposable surgical face masks for preventing surgical wound infection in clean surgery. Cochrane Database Syst Rev. 2002;(1):CD002929. (New search for studies and content updated; 2010 Jan 3).
PubMed: PM11869644

2. Bahli ZM. Does evidence based medicine support the effectiveness of surgical facemasks in preventing postoperative wound infections in elective surgery? J Ayub Med Coll Abbottabad. 2009 Apr;21(2):166-70.
PubMed: PM20524498

Randomized controlled trials

3. Webster J, Croger S, Lister C, Doidge M, Terry MJ, Jones I. Use of face masks by non-scrubbed operating room staff: a randomized controlled trial. ANZ J Surg. 2010 Mar;80(3):169-73.
PubMed: PM20575920

Non-randomized studies
No literature identified.

Guidelines and recommendations
No literature identified.

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APPENDIX – FURTHER INFORMATION:

Guidelines and Recommendations - methods not specified

4. Recommendations on prevention of surgical site infection [Internet]. Hong Kong: Scientific Committee on Infection Control, and Infection Control Branch, Centre for Health Protection, Department of Health; 2009 Feb. [cited 2011 Jun 13]. Available from: http://www.chp.gov.hk/files/pdf/recommendations_on_prevention_of_ssi.pdf

Review articles

5. Datta CR. Use of surgical facemasks in the operation theatre: effective or habit? Med J Armed Forces India [Internet]. 2010;66(2):163-5. Available from: http://medind.nic.in/maa/t10/i2/maat10i2p163.pdf

6. Belkin NL. The surgical mask: are new tests relevant for OR practice? AORN J. 2009 May;89(5):883-91. PubMed: PM19422946

Additional references

7. Centers for Disease Control and Prevention (CDC). Bacterial meningitis after intrapartum spinal anesthesia - New York and Ohio, 2008-2009. MMWR Morb Mortal Wkly Rep. 2010 Jan 29;59(3):65-9. PubMed: PM20110933